CLAIMS

What is claimed is:

1 1. A method of managing a distributed transaction, the method comprising the steps of:

2 gathering latency information by monitoring latency of a network;

3 generating one or more time period values based on said latency information;

4 determining whether to terminate distributed transactions based on said one or more

5 time period values;

6 determining whether said latency information indicates that changes in the latency of

7 said network satisfy adjustment criteria; and

8 if said latency information indicates that changes in the latency of said network satisfy

9 adjustment criteria, then adjusting said one or more time period values.

1 2. The method of Claim 1, wherein a participant participating in said distributed

2 transaction executes a transaction from said distributed transaction and terminates said

3 transaction based on termination criteria that includes at least one criterion based on a

4 particular value from said one or more time period values.

1 3. The method of Claim 2, wherein said distributed transaction is managed by a

2 coordinator that cooperates with said participant to execute the distributed transaction

3 by communicating messages with the participant over the network.

1 4. The method of Claim 3, wherein the step of communicating with the participant over

2 the network is performed using a stateless protocol.

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1   5.   The method of Claim 4, wherein the stateless protocol is HTTP or HTTPS.

1   6.   The method of Claim 3, wherein said particular value is based on a period of time

2   between when a message is transmitted between said coordinator and said participant

3   and when an acknowledgement that the message has been received is received by the

4   originator of the message.

1   7.   The method of Claim 1, wherein:

2   said one or more time period values includes a particular value;

3   the step of monitoring includes generating a set of one or more transit times, wherein

4   each of said set of one or more transit times reflects a period of time between

5   when a message is transmitted over the network from a sender to a receiver

6   and when the sender receives an acknowledgement from the receiver that the

7   receiver has received the message; and

8   wherein said adjustment criteria includes a criterion that each of said set of one or

9   more transit times lie outside a range associated with said particular value.

1   8.   The method of Claim 7, wherein the step of generating a set of one or more transit

2   times includes the step of generating at least two transit times.

1   9.   The method of Claim 7, wherein the step of generating a set of one or more transit

2   times is performed by pinging a server connected to a particular network.

1   10.   The method of Claim 2, further including the step of determining a transaction

2   execution threshold period that reflects a period of time needed for said participant to

3   execute operations for transactions, wherein said particular value is based on said

4   transaction execution threshold period.

1   11.   The method of Claim 1, wherein:

2   said transaction specifies a modification to an item of data; and

3   said participant determines whether said transaction satisfies termination criteria

4   before allowing another modification specified by another transaction for said

5   item of data.

1   12.   A method of managing a distributed transaction, the method comprising the steps of:

2   determining a set of one or more transaction execution periods for transactions

3   executed by a participant that participates in distributed transactions, wherein

4   each transaction execution period of said set of one or more transaction

5   execution periods reflects the period of time that elapsed for said participant to

6   execute said each transaction;

7   if a difference between each of said set of one or more transaction execution periods

8   and a transaction execution threshold period satisfies adjustment criteria, then

9   adjusting said transaction execution threshold period; and

10   wherein termination criteria used to determine whether to terminate said distributed

11   transaction is based on said transaction execution threshold period.

1   13.   The method of Claim 12, wherein said adjustment criteria include a criterion that said

2   difference is so great that each of said set of one or more transaction execution

3   periods lies outside a range based on said transaction execution threshold period.

1   14.   The method of Claim 12, further including the steps of

2   monitoring a network for changes in latency of the network; and

3   generating one or more time period values based on said changes in latency, wherein

4   said termination criteria include a criterion based on said one or more time

5   period values.

1   15.   A method of managing a distributed transaction, the method comprising the steps of:

2   monitoring latency of a network, wherein said latency of said network is used to

3   generate one or more time period values used to determine whether to

4   terminate distributed transactions; and

5   if changes in latency satisfy adjustment criteria, then adjusting said one or more time

6   period values used to determine whether to terminate said distributed

7   transaction.

1   16.   A computer-readable medium carrying one or more sequences of instructions for

2   managing a distributed transaction, wherein execution of the one or more sequences

3   of instructions by one or more processors causes the one or more processors to

4   perform the steps of:

5   gathering latency information by monitoring latency of a network;

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6   generating one or more time period values based on said latency information;

7   determining whether to terminate distributed transactions based on said one or more

8   time period values;

9   determining whether said latency information indicates that changes in the latency of

10   said network satisfy adjustment criteria; and

11   if said latency information indicates that changes in the latency of said network satisfy

12   adjustment criteria, then adjusting said one or more time period values.

1   17.   The computer-readable media of Claim 16, wherein a participant participating in said

2   distributed transaction executes a transaction from said distributed transaction and

3   terminates said transaction based on termination criteria that includes at least one

4   criterion based on a particular value from said one or more time period values.

1   18.   The computer-readable media of Claim 17, wherein said distributed transaction is

2   managed by a coordinator that cooperates with said participant to execute the

3   distributed transaction by communicating messages with the participant over the

4   network.

1   19.   A computer-readable medium carrying one or more sequences of instructions for

2   managing a distributed transaction, wherein execution of the one or more sequences

3   of instructions by one or more processors causes the one or more processors to

4   perform the steps of:

5 determining a set of one or more transaction execution periods for transactions

6 executed by a participant that participates in distributed transactions, wherein

7 each transaction execution period of said set of one or more transaction

8 execution periods reflects the period of time that elapsed for said participant to

9 execute said each transaction;

10 if a difference between each of said set of one or more transaction execution periods

11 and a transaction execution threshold period satisfies adjustment criteria, then

12 adjusting said transaction execution threshold period; and

13 wherein termination criteria used to determine whether to terminate said distributed

14 transaction is based on said transaction execution threshold period.

1 20. A computer-readable medium carrying one or more sequences of instructions for

2 managing a distributed transaction, wherein execution of the one or more

3 sequences of instructions by one or more processors causes the one or more

4 processors to perform the steps of:

5 monitoring latency of a network, wherein said latency of said network is used to

6 generate one or more time period values used to determine whether to

7 terminate distributed transactions; and

8 if changes in latency satisfy adjustment criteria, then adjusting said one or more

9 time period values used to determine whether to terminate said distributed

10 transaction.